REMARKS

This amendment responds to the Office Action dated September 10, 2003 in which the Examiner rejected claims 1-4 under 35 U.S.C. § 103.

As indicated above, claim 1 has been amended in order to make explicit what is implicit in the claim. It is respectfully submitted that the amendment is unrelated to a statutory requirement for patentability and does not narrow the literal scope of the claim.

Claim 1 claims a test socket with a contact to be electrically connected to an external connection terminal of a member to be tested so as to be used for testing an electrical characteristic of the member. The contact comprises a tip end, a plurality of irregularly shaped protuberances and irregularly shaped recesses, resiliently-deformable bulging sections, and a support section. The tip end is to be brought into contact with the external connection terminal. The plurality of irregularly shaped protuberances and plurality of irregularly shaped recesses are formed in the tip end. The resiliently-deformable bulging sections extend perpendicularly with respect to the tip end. The support section is provided in an extended line of a direction along which the tip end moves by resilient deformation of the resiliently-deformable bulging sections.

Through the structure of the claimed invention having a plurality of irregularly shaped protuberances and a plurality of irregularly shaped recesses formed in the tip end, as claimed in claim 1, the claimed invention provides a contact which ensures electrical connection between the contact and the external connection terminals of the member. Furthermore, since the contact load is equally distributed by the resiliently-deformable

bulging sections, the top end of the contact does not scrape the member to be tested. The prior art does not show, teach or suggest the invention as claimed in claim 1.

Claims 1, 2 and 4 were rejected under 35 U.S.C. § 103 as being unpatentable over *Ozawa et al.* (U.S. Patent No. 5,599,194) in view of *Luther* (U.S. Patent No. 3,996,516).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejections to the claims and allows the claims to issue.

Ozawa et al appears to disclose that in Japanese Patent Application Laid-Open 61-150249, a ring-like contact pin of thin wall construction is proposed for use in an IC socket which is used for mounting an IC device or similar electronic parts (see FIG. 17). In an IC socket, as shown in FIGS. 18 and 19, the leads of an IC device positioned on top 3 of a multiple contact pin 10' (FIG. 17) and aligned on a socket body 20 are pressed toward contact pin 10' by pads 21-1 and 21-2 fitted on cover 21 linked on socket body 20 by shaft 23 as the cover is closed. However prior art pins similar to contact pins 10' have the disadvantage of poor electrical connection due to an insulation of oxide film formed on the surfaces of the leads; and each contact pin 10', when pads 21-1 and 21-2 fitted on cover 21 are pressed for connections of the leads and contact pins 10' as cover 21 is closed. Also, prior art contact pins similar to contact pin 10' have the disadvantage that they are too weak to endure severe plastic deformation as they are made of ring plates having a very thin wall. (col. 1, lines 33-51) Further, prior art IC sockets having mount contact type

contact pins 10' have the disadvantage that it is hard to align the leads of the IC device in positions between guide walls provided in the IC socket. Furthermore, it has a disadvantage that the leads may be bent or broken if deformed when the cover 21 is closed. (col. 1, lines 59-64)

Thus, *Ozawa et al* merely discloses a contact pin 10'. Nothing in *Ozawa et al* shows, teaches or suggests a plurality of irregularly shaped protuberances and a plurality of irregularly shaped recesses formed in a tip end as claimed in claim 1. Rather, *Ozawa et al* merely discloses a contact 10' as shown in Figure 17.

Luther appears to disclose a test piece 12 which is in the form of a printed circuit board is positioned into a receiving plate 11 and secured in position by a pressure plate 13 which is preferably pneumatically displaceable toward and away from the printed circuit 12. A plurality of measuring pins 15 are resiliently mounted for axial movement in opposed openings of a pair of spaced guide plates 14 in which the openings are positioned in a grid pattern to define a matrix. Each pin is provided with a compression spring 16 so as to urge each pin with a relatively low static pressure 10-100 p per pin against measuring points 19 on the printed circuit board 12. (col. 3, lines 34-46) As may be seen in FIG. 2 each measuring pin 15 is provided with a tip 25 which in this embodiment has a rectangular conical shape so as to facilitate penetration through the lacquer coating 20. (col. 3, lines 58-61) In FIG. 3 there is shown a modification of the measuring pin 15 wherein the tip comprises a plurality of smaller pyramid shaped points or tips 31 arranged in the form of a grid on a surface 30 which is facing toward the test piece 12. The tips 31

provide optimum surface contact when establishing electrical contact with the plan conductor paths 18 or with the measuring points 19. (col. 4, lines 37-44)

Thus, *Luther* merely discloses a measuring pin 15 having a tip comprising a plurality of pyramid shaped points 31 arranged in the form of a grid. Nothing in *Luther* shows, teaches or suggests a plurality of irregularly shaped protrusions and a plurality of irregularly shaped recesses formed in a tip end as claimed in claim 1. Rather, *Luther* teaches away from the claimed invention and discloses a grid of pyramid shaped tips 31.

A combination of *Ozawa et al.* and *Luther* would merely suggest to replace the tip of the contact pin 10' of *Ozawa et al.* with the grid of pyramid shaped points 31 as taught by *Luther*. Thus, nothing in the combination of *Ozawa et al.* and *Luther* show, teach or suggest a plurality of irregularly shaped protrusions and recesses as claimed in claim 1. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claim 1 under 35 U.S.C. § 103.

Claims 2 and 4 depend from claim 1 and recite additional features. It is respectfully submitted that claims 2 and 4 would not have been obvious within the meaning of 35 U.S.C. § 103 over *Ozawa et al.* and *Luther* at least for the reasons as set forth above. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 2 and 4 under 35 U.S.C. § 103.

Claim 3 was rejected under 35 U.S.C. § 103 as being unpatentable over *Ozawa et al.* and *Luther* and further in view of *Grabbe* (U.S. Patent No. 4,995,816).

As discussed above, since nothing in the combination of the primary references to *Ozawa et al.* and *Luther* show, teach or suggest the primary feature as claimed in claim 1, it is respectfully submitted that the combination of the primary references with the secondary reference to *Grabbe* will not overcome the deficiencies of the primary references. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claim 3 under 35 U.S.C. § 103.

Since withdrawn claims 5-8 depend from allowable claim 1, it is respectfully requested that these claims also be allowed.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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